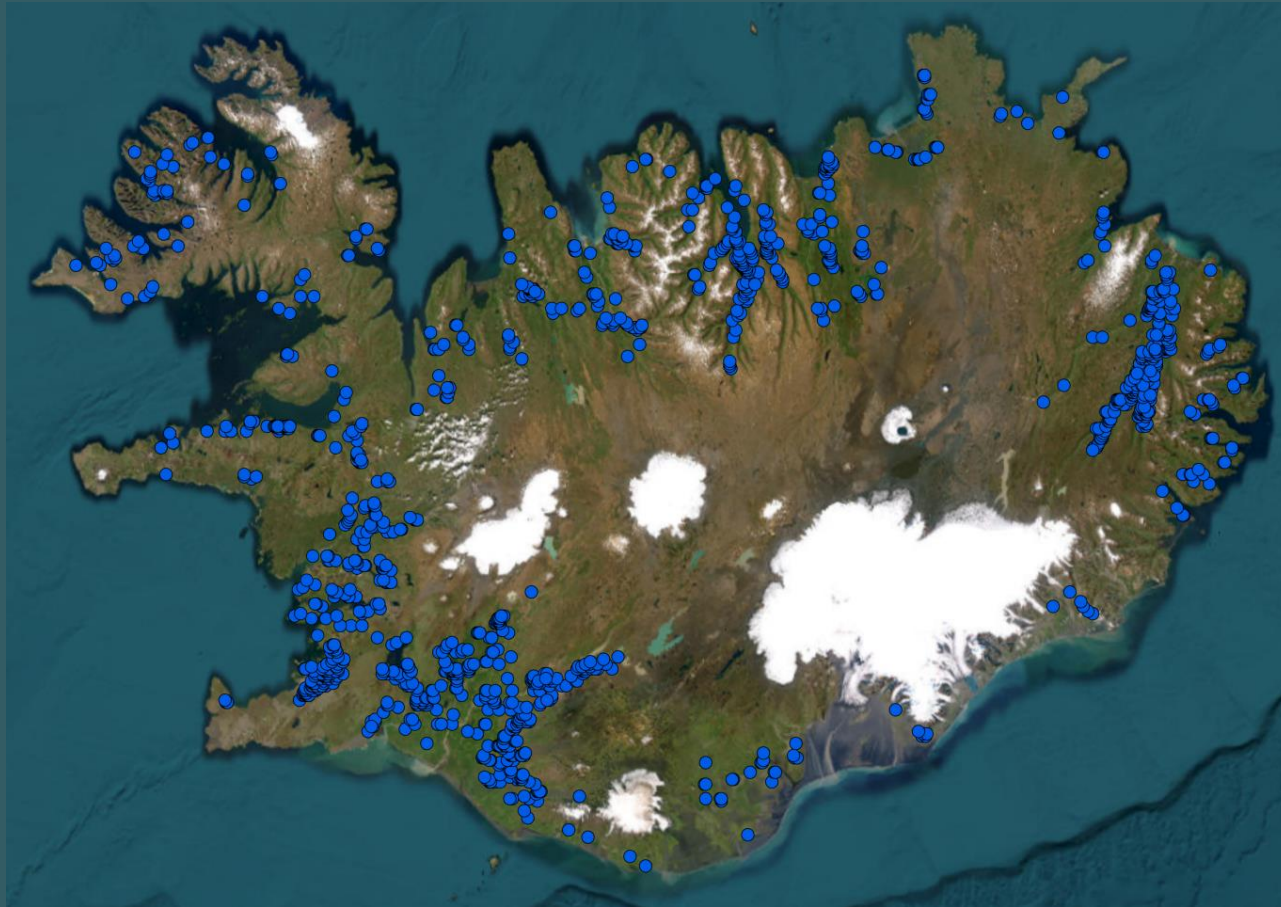


The Role of Icelandic National Forest Inventory (INFI) in Assessing the Status of Soil Carbon

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Icelandic National Forest Inventory (INFI)



All sample plots of the INFI 2005-2022

Started in 2005

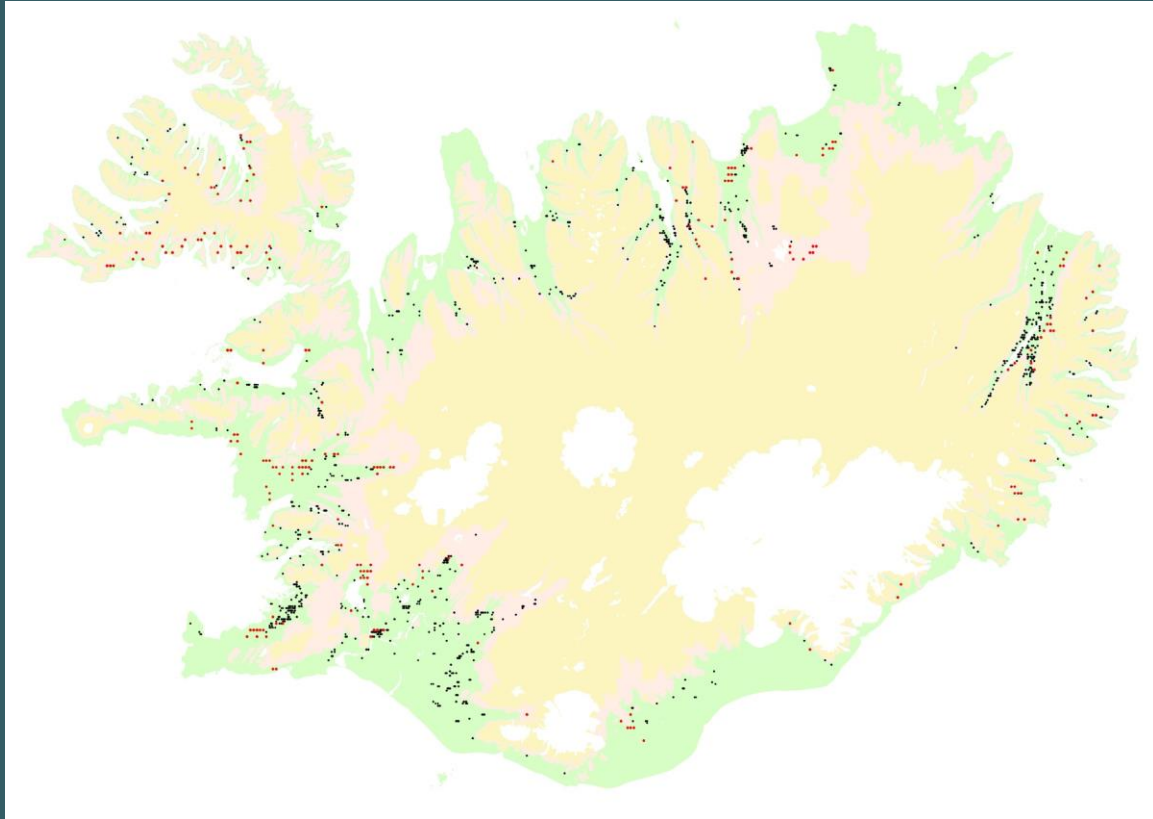
Then the main aims to evaluate

1. Carbon stock aboveground
2. Growth rate
3. Distribution and size of natural and planted forests
4. Other forest statistics and environmental data collected

➤ Cultivated Forest: 960 plots

➤ Natural Birch Woodland: 312 plots

Icelandic National Forest Inventory (INFI)



Goals:

1. To make up to date map over the woodlands and forests. Report on size/area, shape and location
2. Measure quantities (on area unit) of national importance in the forests (number, C-stock, volume) (quantitative data)
3. Make a description of the characteristics in the forests which are of national importance (qualitative data)

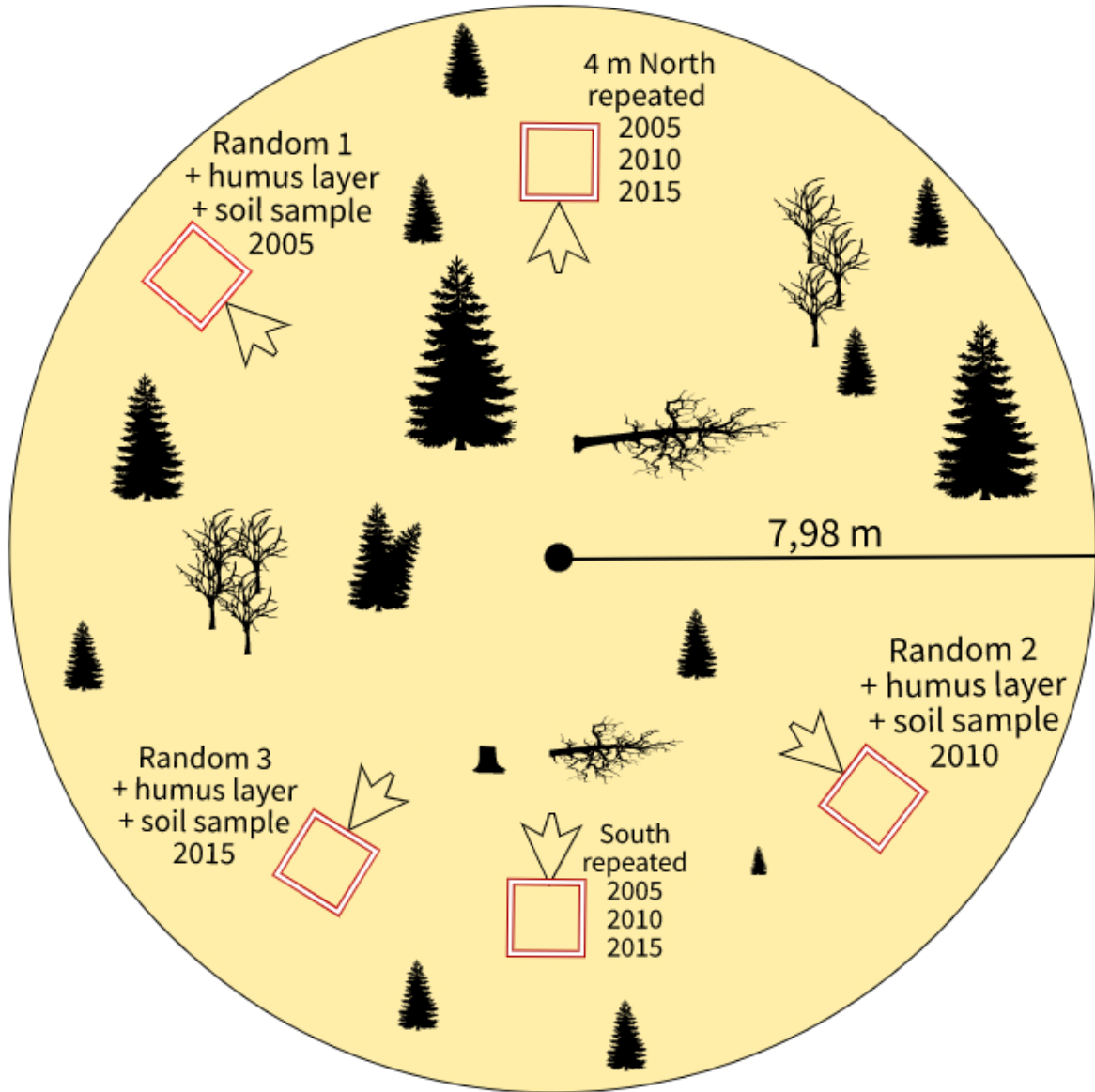


Ongoing and finished main field projects

- 2005-2009
1st NFI cycle. The country wide sample plot inventory in both *cultivated forest* and *natural birch woodland*.
- 2010-2014
2nd NFI cycle. Re-measurement of sample plot in *cultivated forest*.
Re-mapping of *natural birch woodland* (but no measurements)
- 2015-2019
3rd cycle of *cultivated forest* and the 2nd cycle of *natural birch woodland*
- 2020-2024
4th cycle of *cultivated forest*. New plots due to afforestation.
- 2025-2029
5th cycle of *cultivated forest*. New plots due to afforestation.
3rd cycle of *natural birch woodland*.
 - With emphasis on Biodiversity, forest health and SOC

Each plot

- 200 m²
- Description and measurements
- 50 cm x 50 cm squares for ground vegetation description
- 10 cm x 10 cm vegetation sample
- 30 cm Soil sample in the "Random" square





What have we done until today?

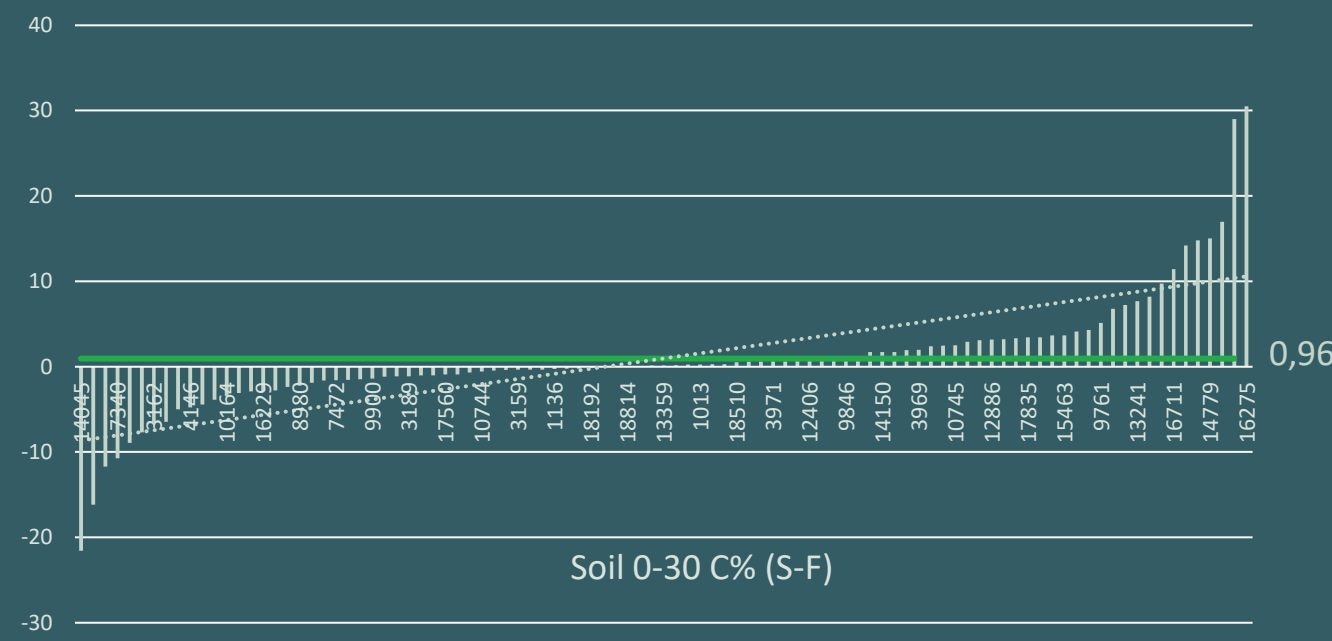
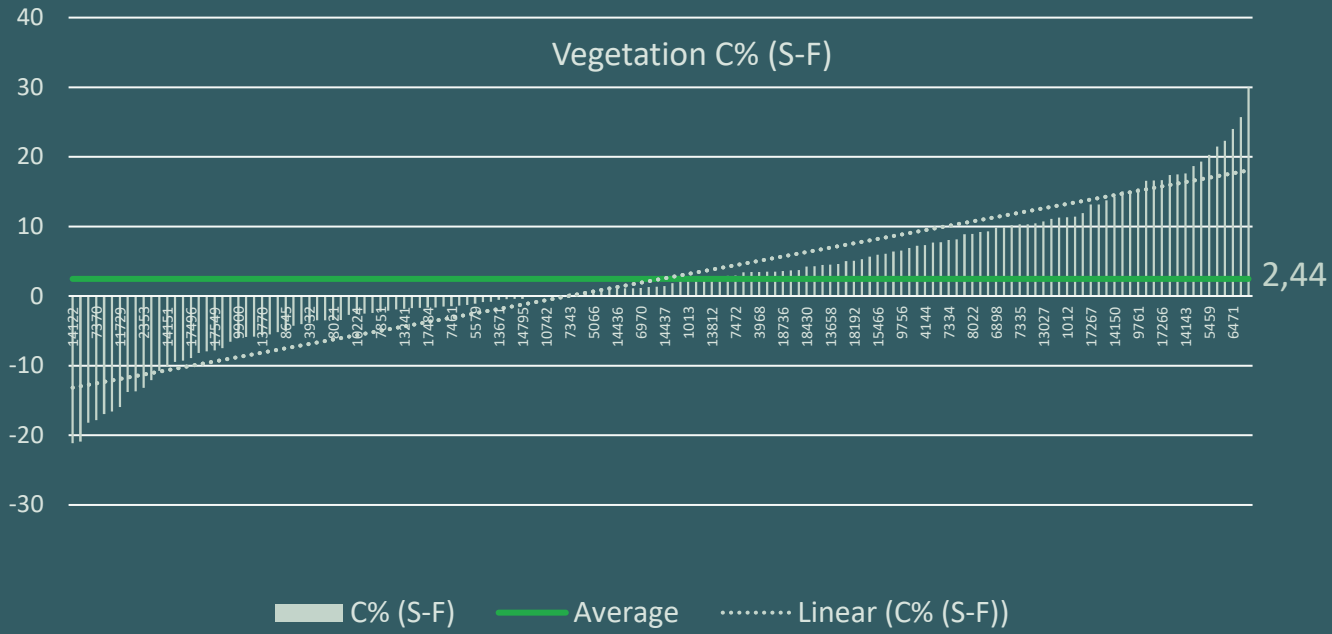
- 1 x sample per plot (within the random frame)
 - Vegetation 10x10cm frame
 - Soil sample (30cm core)
 - Humus
 - Soil
- We have analyzed samples from 168 NBW sites, taken 10 years apart
- We have unprocessed ca 4500 samples taken from other sites from the INFI plots from 2005-2019



SOC in Icelandic NBW forests

We have analysed samples from 168 plots of NBW (2005-2009/2015-2019)

- Vegetation (without wood)
- Soil top 30cm
- [Preliminary data](#)
- C% difference in vegetation and top 30 cm soil





2009



B7371

2019



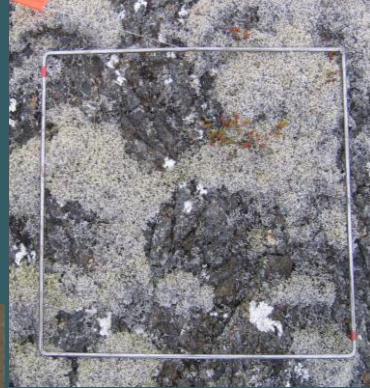
2009



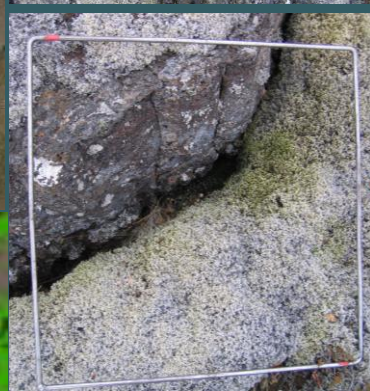
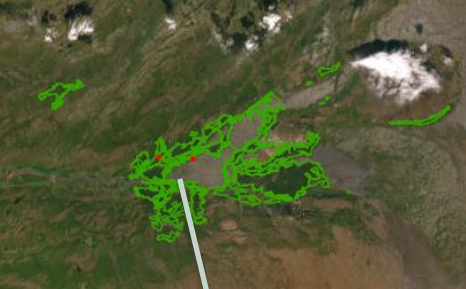
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2019

N



S

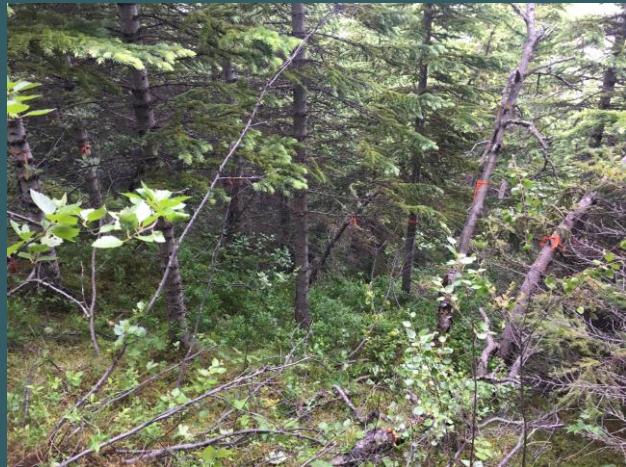




2008



R143754



2018



What is our plan?

- We would like to do a more detailed and focused measurements of SOC
- Make a new plan for 2025-2029 cycle
 - Better statistical data
 - More replications within sites to decrease the variance in the data
 - Increase our knowledge on the carbon stocks in soils for governmental and scientific use



**Kærar þakkir
fyrir áheyrnina!**